REMARKS/ARGUMENTS

By this Amendment, claims 36, 46 and 57 are canceled, claims 37-45, 47-56, 58-68 and 73 are amended and claims 76-78 are added. Claims 37-45, 47-56 and 58-78 are pending.

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because the Amendment: (a) places the application into condition for allowance (for reasons discussed herein), (b) does not raise any new issues requiring further search and/or consideration (because the Amendment is directed to subject matter previously considered during prosecution), (c) does not present any additional claims without canceling a corresponding number of finally rejected claims, and (d) places the application into better form for appeal, should an appeal be necessary. Applicants respectfully request entry of the Amendment.

Regarding Claims 38, 40, 43, 45, 49, 51, 54, 56, 60, 62, 65 and 67, the Examiner sets forth that the phrase "such as" renders the claims indefinite because it is unclear to the Examiner whether the limitations following the phrase are part of the claimed invention. The Examiner directs the Applicant's attention to MPEP § 2173.05(d).

According to the Examiner, Claim 50 is inherent the deficiency of Claim 49, since Claim 50 depends on Claim 49.

The Applicant submits that the claims have been amended accordingly.

The Examiner further sets forth that Claims 38, 40, 43, 45, 49, 50, 51, 54, 56, 60, 62, 65 and 67, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims.

The Examiner sets forth that Claims 36, 46, and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Imanaka (U.S. Patent No. 6,025,932).

The Examiner further sets forth that regarding Claims 36,46 and 57, Imanaka discloses a method of evaluating a collection of data incorporated into an interlocking trees data store situated within active memory accessible to process running in a computer said interlocking trees data store comprising a structured collection of nodes connected by links of said nodes having pointers to other-nodes of said interlocking trees data store wherein said nodes contain a count field said nodes including at least nominally different kinds of nodes a first kind called-root nodes of which there are at least one primary root node and at least one elemental root node and which may include other root nodes, a second kind of node called an end of though node, at least one node of a third kind of node called a subcomponent node, and at least one node of a kind of node called an end product node, and wherein there exist at least two kinds of said links asResult and asCase links, wherein said asResult links point between a one of said root nodes and any other node and wherein said asCase links point between said at least one primary root node and at least one said end product node and include in a path between said end product node and said primary root node at least one said subcomponent node, said method comprising the steps of:

determining a K context within said data store and its corresponding K context value (the Examiner directs the Applicant's attention to Col. 6, lines 54-60, Imanaka);

determining a *focus* within said K context and its corresponding *focus* value (the Examiner directs the Applicant's attention to Col. 7, lines 10-15, Imanaka);

calculating probability of the occurrence of said focus within said K context employing the corresponding value of said K context and said *focus* (the Examiner directs the Applicant's attention to Col. 11, lines 19-33, Imanaka); and

providing a probability value corresponding to said probability of the occurrence of said *focus* within said K context to said process running in said computer (the Examiner directs the Applicant's attention to Col. 10, lines 56-67, Imanaka).

According to the Examiner, Claims 37, 39, 41, 42, 44, 47, 48, 52, 53, 55, 58, 59, 61, 63, 64, and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims.

The following is a statement of reasons for allowance set forth by the Examiner: regarding claims 37, 39, 41, 42, 44, 47, 48, 52, 53, 55, 58, 59, 61, 63, 64, and 66, the Examiner believes that the prior art fails to teach or suggest the steps of nodes and links between said node each of said nodes having a plurality of data fields, at least two of the plurality of data fields containing a pointer, one of the at least two pointers being a Case pointer and the other of the at least two pointers being a Result pointer and at least one node having at least one additional pointer to a list of pointers one of the additional pointers to said list of pointers being to an asCase list of pointers in instance where said node has an associated as Case list and another being to asResult list of pointers in instance where the node has associated an associated as Result list, and wherein said nodes include types of nodes called root nodes of which there are at least one primary root node and at least one elemental root node and wherein said nodes may include another root nodes, said nodes further including types of nodes called end of thought nodes of which there is in said structure at least one end of thought node, types of nodes called subcomponent nodes of which there is in the structure at least one subcomponent node, and types of nodes called product nodes of which there is in said structure at least one end product node, and wherein the as Result links point between a root node and any other of the node types, and wherein asCase links point between said at least one primary root node and at least one end product node, including in a path there between at least one subcomponent node and wherein the elemental root nodes also have a field having one of the values, in conjunction with remaining claim provisions, is not taught or suggested, or rendered obvious over the prior art of record or that encountered in searching the invention.

According to the Examiner the following is a statement of reasons for allowance as set forth by the Examiner regarding independent claims 68, 73, and 74, the Examiner believes that the prior art fails to teach or suggest the steps of: nodes and links between said node each of said nodes having a plurality of data field, at least two of the plurality of data fields containing a pointer, one of the at least two pointers being a

Case pointer and the other of the at least two pointers being a Result pointer and at least one node having at least one additional pointer to a list of pointers one of the additional pointers to said list of pointers being to an asCase list of pointers in instance where said node has an associated asCase list and another being to asResult list of pointers in instance where the node has associated an associated asResult list, and wherein said nodes include types of nodes called root nodes of which there are at least one primary root node and at least one elemental root node and wherein said nodes may include another root nodes, said nodes further including types of nodes called end of thought nodes of which there is in said structure at least one end of thought node, types of nodes called subcomponent nodes of which there is in the structure at least one subcomponent node, and types of nodes called product nodes of which there is in said structure at least one end product node, and wherein the asResult links point between a root node and any other of the node types, and wherein asCase links point between said at least one primary root node and at least one end product node, including in a path there between at least one subcomponent node and wherein the elemental root nodes also have a field having one of the values, in conjunction with remaining claim provisions, is not taught or suggested, or rendered obvious over the prior art of record or that encountered in searching the invention.

According to the Examiner, the dependent claims 69-70, and 75 being further limiting to the independent claims, definite and enabled by the Specification are also allowed.

Imanaka teaches a digital information and coding apparatus wherein a "context" generator extracts reference picture elements from picture data according to a template model. The picture elements can be extracted, for example, from a template a few successive elements in a row for a few successive rows.

The "context" taught by Imanaka has bit patterns of picture elements wherein the picture elements represent horizontal line scans of an image. The "context" taught by Imanaka therefore includes information selected from the total information representing in the image, wherein the information selected to be part of the "context" of Imanaka is

extracted from a conventional linear database according to a predetermined template.

The templates shown in Figs. 2A, B are examples of the predetermined templates which can be used to determine which bits are extracted from the linear database. Thus, the pixel elements obtained during an extraction are extracted according to a predetermined pattern defined by the template. Since all of the pixels to be selected are known at the start of the extraction, there is no need for any traversal of the data structure from one element to another whatsoever in the Imanaka system. Accordingly, Imanaka does not teach any bidirectional links between the picture elements for traversing the picture elements. In particular, there is no traversal of a K path such as the K paths set forth in the Applicant's new claims 76-78 in the Imanaka system.

The Applicant's invention is a system and method for determining information, including context information, from data represented in an interlocking trees datastore, also known as a KStore. The KStore of the Applicant's invention includes a plurality of K paths. The K paths defined in the Applicant's invention can include a plurality of K nodes connected by links.

Thus, the references cited by the Examiner do not teach any K nodes or K paths whatsoever as required by the Applicant's invention.

The K nodes include a value and a plurality of pointers which serve as the links for associating the nodes of the datastore with other nodes in the datastore. The links connecting the nodes within the Applicant's KStore are bidirectional Case links and bidirectional Result links. Information such as context information can be obtained from the Applicant's KStore by traversing the foregoing K paths from K node to K node using the foregoing links, for example, according to a constraint provided by a user.

Thus, the traversal of a K path within the Applicant's datastore is performed by following the Case bidirectional links and the Result bidirectional links from one K node to another in a predetermined manner as set forth in the specification. In the Applicant's invention, such traversals can be performed according to constraints provided by a user to determine a context as set forth in new claims 76-78.

Therefore, the Applicant's new claim 76 sets forth a method of evaluating a collection of data represented by an interlocking trees data store situated within active memory accessible to a process running in a computer. The interlocking trees datastore comprising a plurality of K paths structured having a collection of nodes connected by links of the nodes having pointers to other nodes of the interlocking trees datastore, wherein the nodes contain a count field, the nodes including at least nominally different kind of nodes, a first kind called root nodes of which there are at least one primary root node and at least one elemental root node and which may include other root nodes, a second kind of node called an end of thought node, at least one node of a third kind of node called a subcomponent node, and at least one node of a kind of node called an end product node, and wherein there exist at least two kinds of the links, asResult and asCase links, wherein the asResult links point between a one of the root nodes and any other node, and wherein the asCase links point between the at least one primary root node and at least one the end product node and include in a K path between the end product node and the primary root node at least one the subcomponent node.

The method includes traversing at least one K path of the plurality of K paths using at least one link of the asResult links or the asCase links, determining a K context within the data store in accordance with the traversing of the at least one K path and determining a corresponding context value of the K context. A focus within the K context and its corresponding focus value are determined and a probability of an occurrence of the focus within the K context are calculated in accordance with the corresponding K context value and the focus value. A probability value corresponding is provided according to the probability of the occurrence of the focus within the K context to the process running in the computer.

The Applicant's new claim 77 sets forth a method of evaluating a collection of data incorporated into an interlocking trees data store situated within active memory accessible to a process running in a computer, the interlocking trees datastore comprising a plurality of K paths having a structured collection of nodes connected by

links of the nodes having pointers to other nodes of the interlocking trees datastore, wherein the nodes contain a count field, the nodes including at least nominally different kinds of nodes, a first kind called root nodes of which there are at least one primary root node and at least one elemental root node and which may include other root nodes, a second kind of node called an end of thought node, at least one node of a third kind of node called a subcomponent node, and at least one node of a kind of node called an end product node, and wherein there exist at least two kinds of the links, asResult and asCase links, wherein the asResult links point between a one of the root nodes and any other node, and wherein the asCase links point between the at least one primary root node and at least one the end product node and include in a K path between the end product node and the primary root node at least one the subcomponent node.

The method includes traversing at least one K path of the plurality of K paths using at least link of the asResult links or the asCase links, determining a K context within the data set in accordance with the traversing of the at least one K path, determining a position along each K path of the K context and determining a focus within the K context and its corresponding value. A probability of an occurrence of the focus between the position and the end product node along at least one K path within the K context is calculated and the probability of the occurrence of the focus between the position and the end product along the K path within the K context to the process running in the computer is provided.

The Applicant's new claim 78 sets forth a method of evaluating a collection of data represented by an interlocking trees data store situated within active memory accessible to a process running in a computer, the interlocking trees datastore comprising a plurality of K paths having a structural collection of nodes connected by links of the nodes having pointers to other nodes of the interlocking trees datastore, wherein the nodes contain a count field, the nodes including at least nominally different kinds of nodes, a first kind called root nodes of which there are at least one primary root node and at least one elemental root node and which may include other root nodes, a second kind of node called an end of thought node, at least one node of a third kind of

node called a subcomponent node, and at least one node of a kind of node called an end product node, and wherein there exist at least two kinds of the links, asResult and asCase links, wherein the asResult links point between a one of the root nodes and any other node, and wherein the asCase links point between the at least one primary root node and at least one the end product node and include in a K path between the end product node and the primary root node at least one the subcomponent node. The method includes traversing at least one K path of the plurality of K paths using at least link of the asResult or asCase links, determining a K context within the data set in accordance with the traversing of the at least one K path and determining its corresponding value, determining a position along each K path of the K context and determining a focus within the K context and its corresponding value. A probability of the occurrence of the focus between the position and the primary root, along the K path within the K context is calculated. The probability of an occurrence of the focus between the position and the primary root along the K path within the K context to the process running in the computer is provided.

Since Imanaka teaches storing the data representing the image as line data and extracting picture elements on a line by line basis to determine a "context" as defined by Imanaka, there is no teaching or suggestion in Imanaka of the Applicant's inventive step of traversing at least one K path using at least one link, as set forth in the Applicant's new claims 76-78. Furthermore, since there is no suggestion of the K nodes and K paths in Imanaka, it must follow that there can not be any teaching to traverse such K nodes and K paths.

As previously described, since the template taught by Imanaka extracts all of the pixel elements to be extracted according to a predetermined pattern there is no need whatsoever for any traversal of the linear data structure from one element to another. In particular, there is no suggestion of to traverse a K path such as the K paths set forth in the Applicant's new claims 76-78.

Furthermore, the Applicant's invention sets forth determining a K context according to such traversing of such a K path. Since Imanaka does not teach traversing

a K path, it follows that it does not teach or suggest determining a context in accordance with such a traversal.

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

CAESAR, RIVISE, BERNSTEIN,
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August 25, 2005

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Please charge or credit our Account No. 03-0075 as necessary to effect entry and/or ensure consideration of this submission.